Condition S2. Applications for Coverage or Modification of Coverage

Ecology proposes to modify Condition S2.C by removing the applicability of automatic commencement of applications for modification of coverage, including applications for waivers and extensions under Condition S8. The permit should retain an automatic commencement process in order to provide regulatory certainty that would otherwise be lost under the proposed modification. The availability of some process to modify permit corrective action deadlines to address site specific conditions is essential. The waiver and extension process will be illusory unless there is allowance for automatic commencement of permit modifications that authorize waivers and extension. In 2011 the department was unable to process the majority of waiver and extension requests. Without automatic commencement, many facilities that are entitled to waiver and extension would be forced to comply with inappropriate deadlines and they will have no recourse to avoid being in noncompliance with the permit. Retaining the automatic commencement provision also will allow for orderly permit implementation. In the event there is automatic commencement of a waiver and extension, Ecology would retain the authority to modify that result through administrative orders and do so in a way that allows facilities to remain in compliance with the permit. Boeing thus objects to the removal of the provision concerning the applicability of automatic commencement of applications for modification of coverage including applications for waivers and extensions under Condition S8. It is neither fair nor necessary to pull a provision providing certainty in this already excessively complex permit under these circumstances.

Ecology should add clarifying language that public notice does not have to be completed by the April 1st deadline for applications for waivers and extensions under Condition S8. The draft modification already imposes a significantly shorter deadline for Condition S8 applications and there is no reason for Ecology to delay considering the applications pending documentation that public notice has been completed.

Boeing recommends that Ecology retain the approval process in S8 by providing the permittee with more specific instructions and examples. The Department should embrace its duty to make at least a reasonable effort in education and outreach prior to removing a valuable tool for permittee compliance created by “confusion”, as noted in the Fact Sheet (page 10, para 2).

Boeing has the following questions regarding the proposed modifications to Condition S2:

Q1: Will applications be deemed automatically denied if Ecology does not approve the applications within 60 days of filing with the department?

Q2: At what point, if any, in the application process should a facility determine whether its application has been automatically denied?

Q3: How do the permittee deadlines change if the department requires clarification or holds public hearings that go beyond the permit deadlines to implement corrective action?

Condition S6. 303(d) Limits

Ecology proposes to replace numeric effluent limitations for discharges to section 303(d) water bodies listed as impaired for fecal coliform criteria with narrative limits. The proposed narrative limits include requirements to install "effective structural source control BMPs" and "effective source control BMPs to eliminate" known sources of bacteria. Boeing has substantial concern about what is meant by "effective" in the proposed narrative limits. This is an imprecise word that is subject to varying interpretations. Combined with a proposed condition that facilities must "eliminate" known sources of bacteria, the narrative limits are potentially as stringent and likely as impossible to attain as the current numeric limits.

Rather than introducing new and ambiguous terms, Ecology should consider using familiar terminology. For example, the phrase AKART is a generally accepted concept from which to start a discussion on BMP implementation.

Boeing recommends that industrial sites with activities that are not associated bacterial pollution be excluded from the fecal coliform provision in Condition S6 of the ISGP. Ecology concludes in its own report to the legislature[1] and in the 2009 draft ISGP fact sheet that there is no need for any fecal coliform limit to industrial activities that are not associated with bacterial pollution. It is unrealistic for industries not associated with bacterial pollution to attempt to control or eliminate the bacteria associated with animal life, such as birds. The unrealistic nature of such coverage is emphasized by conclusions recently documented in EPA's International Stormwater BMP Database that stormwater treatment systems are likely to act as incubators for animal-introduced bacteria.

Boeing recommends that Ecology work with the permittee to develop a quarterly monitoring program focused on the effectiveness of the BMPs in attaining a sustainable reduction in bacterial pollution. This program would create an adaptive management scheme to apply the preferred BMP approach as conditions change at a facility. The BMP effectiveness approach provides a more objective evaluation of the facility's efforts

[1] Industrial Stormwater Discharges to Impaired Water Bodies, Options for Numeric Effluent Limitations, Ecology No. 09-10-005 (Dec. 2008).

to use AKART successfully than relying on end-of-pipe measurements, particularly in light of the information discussed in previous paragraph.

Boeing has the following questions regarding the proposed modifications to Condition S6:

Q1: Are the BMPs associated with detection and removal of illicit connections (S3.B.7) sufficient to meet the narrative requirement for ensuring exclusion of human-caused fecal coliform bacteria?

Q2: Ecology's proposed modifications to Condition S6 contain ambiguous terms. Permittees need to have a process by which they can determine how they are to satisfy the conditions imposed by these terms.

Q3: What constitute "effective" structural and operation source control BMPs?

Q4: What manuals and guidance documents should be consulted in identifying effective BMPs to reduce or eliminate bacterial pollution?

Q5: What BMP(s) does Ecology consider applicable or recommended for eliminating bacterial contamination in industrial stormwater?

Q6: Does Ecology believe that it would be reasonable and lawful to exclude all wildlife including birds from an industrial facility, with particular concern for species protected under the Endangered Species Act, Migratory Bird Treaty Act, or other similar statutes?

Condition S8. Corrective Actions

1. ***Ecology should defer any modifications to Condition S8 until Boeing's appeal of the ISGP finally has been resolved.*** The Court of Appeals has accepted direct review of PCHB rulings on the legality of the ISGP. (*See e.g.*, *Copper Development Association v. Ecology*, PCHB No 09-135 Findings of Fact, Conclusions of Law and Order (Apr. 25, 2011) (hereinafter, "PCHB Final Order"). One of the issues in that appeal is whether Condition S8 is consistent with the statutory presumption of compliance in RCW 90.48.555. Modification of Condition S8 prior to a decision from the Court of Appeals would be premature, unless Ecology is prepared to adopt permit language or policies that fully implement the statutory presumption of compliance contained in the statute. Modification of Condition S8 corrective actions prematurely could subject permittees to a whip saw of permit changes, not only in response to the Court of Appeals' decision on Boeing's ISGP appeal, but also to the Thurston County Superior Court's ruling on Boeing's administrative appeal of Ecology's ISGP "Frequently Asked Questions" document. Moreover, as discussed below,

the proposed modifications to the permit are inconsistent with a key aspect of the PCHB ruling addressing implementation of adaptive management. Withdrawing the proposed Condition S8 corrective action modifications will ensure that permittees are subjected to the least disruption and can best protect the environment. Boeing is open, as noted above, to revised permit language that addresses the Board's intent by incorporating an effective, efficient and enforceable adaptive management process into the permit that recognizes presumption of compliance with a narrative standard. Boeing provides some suggestions below on how this outcome feasibly could be achieved.

2. ***The proposed additional requirements for annual reporting contained in Condition S8.D is inconsistent with the PCHB Final Order on the consolidated ISGP appeals.*** In the PCHB Final Order, the PCHB held that "Quarterly discharge monitoring reports. . . are likely inadequate in more complex situations such as Level 3 treatment BMPs." The PCHB ordered Ecology to refine Condition S8.D to reflect an "iterative exchange and evaluation of BMPs" between Ecology and a permittee. To accomplish this the PCHB directed Ecology in Condition S8.D to "require the use of monitoring, assessment, or evaluation information as a basis **on which Ecology** and the permittee may determine whether further modification of the BMPs or additional BMPs are necessary to meet the goal of achieving the applicable benchmarks in future discharges." PCHB Final Order, pp 71-72 (emphasis added). Implicit in any such iterative process is a determination whether a permittee must meet permit benchmarks to demonstrate its compliance with water quality standards.

   The language proposed by Ecology to modify Condition S8.D does not establish the iterative process required by the PCHB Final Order. Ecology's proposed language merely requires vague additional information about monitoring and assessment in an annual report. There is no meaningful process for Ecology review and feedback in which Ecology and the permittee can work together to determine whether further modification of BMPs is necessary. If anything, the proposed language makes it more ambiguous as to when and what corrective actions are necessary. In addition, Ecology's reliance on permit waivers and time extensions may be insufficient to satisfy the PCHB's requirement of an iterative adaptive management program. Had these existing tools been adequate, in all likelihood the PCHB would not have found it necessary to require Ecology to refine Condition S8 to become involved in the interplay necessary for adaptive management when a risk to water quality might exist.

   Ecology needs to address how the proposed modification to annual reports are to address the requirement for engineering reports stated in the March 2011

Frequently Asked Questions document #51.[2] In that document Ecology states that any treatment system subject to engineering design requires the preparation of an engineering report as provided in WAC 173-240-130. With respect to this requirement, Ecology should explain:

- The specific requirements for an engineering report and how that is to be addressed in the proposed modifications to the annual reporting requirements.
- How the annual reporting requirements will address the submission and approval of engineering reports under WAC 173-240-130.
- Does Ecology intend to review and approve engineering reports under the proposed modifications to reporting requirements as required under WAC 173-240-130?
- How will the deadlines in the permit for implementing corrective action be addressed pending Ecology review and approval of engineering reports?

Ecology also needs to address an additional new requirement in the ISGP FAQ Document #50 that permittees in Level 3 corrective action must consider treatment BMPs that are not in Ecology manuals or approved by Ecology and further prepare a demonstrably equivalent analysis if the permittee selects a treatment BMP that has not been approved by Ecology. With respect to this requirement Ecology should explain:

- How permittees should incorporate that analysis into the new annual reporting requirements.
- If approval is necessary from Ecology before implementing a demonstrably equivalent treatment BMP described in an annual report.
- How will Ecology implement the PCHB-required iterative review process for demonstrably equivalent treatment BMPs?
- How will a permittee know that it is required to evaluate and implement demonstrably equivalent BMPs?
- How, as part of the PCHB required iterative process, will Ecology evaluate the new information required in the annual reporting and determine when demonstrably equivalent treatment BMPs must be considered by a permittee?

[2] Frequently Asked Question related to this comment letter are contained in appendix 2

Ecology also needs to address how the proposed annual reporting requirements will incorporate the requirement in the ISGP FAQ Document #48 to aggregate discharge exceedances from all outfalls for a specific parameter into a single site value for determination of corrective actions. The resulting corrective action level determination is then applied site-wide. Historically, each discharge at a site was treated as an independent location for purposes of counting exceedances and corrective actions were limited to the basin in which the exceedances occurred. This new theory in counting exceedances results in a greatly increased requirement for corrective actions from facilities with multiple discharges. With respect to this requirement Ecology should explain:

- How does the department differentiate between the requirement for a site using a sampling approach as allowed in S3.B.5.b Substantially Identical Outfalls and the approaches described in response to Question 48 contained in the ISGP FAQ Document?
- How does the permittee count a sampling exceedance when it occurs at different discharge locations on different sample dates but within the same sampling period?
- Do discharges to different receiving waters require aggregation, or are those discharges to be counted independently?
- Will a permittee be allowed to average across the same sample points for determination of benchmark reporting value?

3. ***Boeing proposed Level 3 corrective action***. In the event Ecology intends to develop an iterative Level 3 corrective action process as required by the PCHB prior to a final ruling on the petition for judicial review, Boeing recommends the modifying and replacing Condition S8.B through D as follows:

B. Corrective Action
Permittees that exceed any applicable *benchmark* value in Table 2 or Table 3, or an approved *site specific benchmark* in lieu of a permit *benchmark*, shall complete Corrective Action for each parameter exceeded with the following:

a. Review the SWPPP and ensure that it fully complies with Permit Condition S3, and contains the correct BMPs from the applicable *Stormwater Management Manual*.

b. Make appropriate revisions to the SWPPP to include additional *Operational Source Control*, *Structural Source Control*, and *Treatment BMPs* with the goal of achieving the applicable benchmark values in future discharges. The SWPPP may include an *adaptive management plan* for the implementation of BMPs over time as needed based on monitoring results.

c. If the *geometric mean* of monitoring data from any single outfall in the preceding two years or previous eight quarterly

samples exceeds any applicable *benchmark* in Table 2 or Table 3, the review and revisions of the SWPPP must be conducted by a *stormwater professional* and specifically consider *Treatment BMPs*. The *stormwater professional* shall conduct a comprehensive review of the SWPPP and select BMPs that fully implement *AKART* with the goal of eliminating or reducing pollutants to meet *benchmarks*. The *stormwater professional* shall design and stamp the portion of the SWPPP that addresses *stormwater treatment* structures or processes.

d. In considering *Treatment BMPs* the *stormwater professional* should consider all known, available and reasonable *Treatment BMPs*. The review should not be limited to *Treatment BMPs* identified or incorporated by reference in an applicable *Stormwater Management Manual*. The SWPPP revision and *Treatment BMP* design do not require the preparation or submission of an engineering report under WAC 173-240-130 but must include a summary of the review and analysis that the existing and selected BMPs are technologically available and economically achievable in light of the best industry practice. The Permittee is not required, however, to document that any *Treatment BMP* selected for corrective action is *demonstrably equivalent* under Condition S3.A.3.d.

e. The Permittee may apply for a *site specific benchmark* based on available data or request additional time to collect data to establish a *site specific benchmark*. The corrective actions required under Condition S8.B.c and d shall be based on the goal of meeting approved *site specific benchmarks*.

f. Summarize Corrective Actions (planned or taken) in the Annual Report (Condition S9.B).

g. **Corrective Action Deadlines:** The Permittee shall fully implement any additional or modified *Operational Source Control BMPs* and related revisions to SWPPP as soon as possible but no later than the DMR due date for the quarter the *benchmark* was exceeded. The Permittee shall fully implement any additional or modified *Structural Source Control or Treatment BMPs* and related revisions to SWPPP as soon as possible but no later than July 30th the following year unless *Ecology* has granted a request for a *site specific benchmark*, an *adaptive management plan,* a time extension or waiver.

- Ecology may grant a request for a *site specific benchmark* or schedule to implement a sampling and monitoring plan to develop information to support a *site specific benchmark* by approving a *Modification of Permit Coverage*. A request for a *site specific benchmark* must be supported by an analysis by a *stormwater professional* documenting the basis for a *site specific benchmark* or a proposed sampling and

monitoring plan and data analysis plan for calculating a *site specific benchmark*.

- If installation of necessary *Structural Source Control or Treatment BMPs* cannot be completed by September 30th of the following year, *Ecology* may approve additional time, by approving a *Modification of Permit Coverage*.
- The application for an extension may include an *adaptive management plan*. Ecology may approve additional time as provided in the *adaptive management plan* by approving a *Modification of Permit Coverage*.
- If installation of necessary *Structural Source Control* or *Treatment BMPs* is not feasible or necessary to prevent discharges that may cause or contribute to a violation of a water quality standard, *Ecology* shall waive the requirement for additional *Structural Source Control* or *Treatment BMPs* by approving a *Modification of Permit Coverage*.
- To request a *site specific benchmark*, a time extension or waiver, a Permittee shall submit a detailed explanation of why it is making the request (technical basis), and a *Modification of Permit Coverage* form to *Ecology* and complete public notice in accordance with Condition S2.B, by April 1st prior to the September 30th deadline applicable to the facility. The application *Modification of Permit Coverage* shall be approved denied or automatically commence as provided in Condition S2.C.

h. Additional corrective action is not necessary in the following year, where a waiver has been granted, or during the term of any approved extension or *adaptive management plan*.

Boeing offers this suggested language as an adaptive management approach that creates an iterative process between Ecology and a permittee as required by the PCHB. It is also consistent with the concept of adaptive management in program management and LEAN manufacturing systems as composed of four distinct phases:

> Plan: Identify the need and actions / equipment needed to resolve the identified or anticipated problem. In this case, the focus would be using the sampling data to identify where additional BMPs or other actions may be warranted to reduce pollution or flows.
>
> Do: Implement the plan by installing, operating, maintaining and inspecting BMPs and by taking such additional actions, such as engineering sampling, to further refine the effectiveness of the pollution control effort.

Check: Conduct sampling, flow monitoring, inspections and other action that collect data useful in evaluating the effectiveness of the BMPs and supporting actions.

Act: Using the data collected in the check phase revise the plan to focus on areas where improvement has been insufficient to consistently meet discharge goals. The use of data (*i.e.,* metrics) is a critical element in adaptive management. As noted during the PCHB hearing data collection for a stormwater effort is fraught with challenges due to high variability in weather patterns, industrial activities and sources of pollutants.

The adaptive management process should be a continuous effort in which a permittee collects data on a regular basis and compares the results to the desired outcome. The "plan-do-check-act" cycle described here is repeated until the desired results are attained or feasibility conditions preclude additional actions.

Here is a more detailed summary of the voluntary alternative corrective action approaches that Boeing is proposing:

Geometric mean. Boeing proposes that Ecology use the same statistical analysis, geometric mean, evaluated over eight quarter, used in the EPA's Multi-Sector General Permit, to address the high variability of stormwater discharges.[3] The Boeing proposed permit language will still trigger Level 3 corrective action, but a determination not to implement additional treatment BMPs could be made on the basis of geometric mean assessment of the monitoring data. This option provides an important tool when assessing quarterly monitoring data. Each sampling quarter is an independent meteorological regime. Rainfall patterns differ throughout the year and there are different exposed industrial activities during each quarter. The combination of quarter specific rainfall patterns and activities will result in different pollutants and pollutant loadings being discharged from any given facility when compared to other quarters in the year. Thus a permittee's facility cannot be reasonably characterized on one year's worth of data since each quarter's data is not representative of any other quarter in that year. Weather patterns in Washington State are often significantly different from year to year which further complicates the comparison of quarterly data.

Site Specific Benchmarks. The permit should include a simplified mechanism to apply for a site specific benchmark using the same general criteria used to generate the permit benchmarks using more site specific data and receiving water data to create the site specific benchmark. This is not a new concept as the current permit requires

[3] Allowance for geometric mean assessment of monitoring data over eight quarters is consistent with the PCHB ruling that at least seven quarters of data is necessary to determine if a facility can consistently attain benchmarks. And as the PCHB ruled, four quarterly samples are likely to be inadequate to determine whether additional treatment BMPs are necessary at a facility. PCHB Final Order at 71.

waivers when additional treatment BMPs are not necessary to prevent a discharge from causing or contributing to a violation of water quality standards. Boeing is merely proposing a formal and explicit process for developing information that can be used on an iterative basis by Ecology and the permittee to determine whether additional treatment BMPs are necessary. In other words, Ecology would have to approve the equivalent of site specific benchmarks, developed by the permittee, to grant a waiver under the current permit. Boeing recommends that a probabilistic modeling approach be used in developing a site specific benchmark in recognition of the high variability of rainfall and receiving water conditions. This value would not be an effluent limit as the use of probabilistic models and limited parameters considered would not constitute a reasonable potential analysis. It would, however, be far more representative of the impact that a particular discharger would have on the receiving water. This would be the basis for creating an effective adaptive management system approach to attaining consistent protection of the receiving waters. Inclusive in the analysis for a site specific benchmark would be consideration of a technology based benchmark applicable to the facility. If that discharge value was lower than the water quality based value then the discharge value would be used as the new site specific benchmark.

Adaptive Management Plan. A facility at which the statistical average for the discharge is above the benchmark for the two years could report that fact in its annual report, together with an adaptive management plan prepared by a stormwater professional. The adaptive management plan would be subject to Ecology approval as an addition to the SWPPP in S3. A permittee choosing this option would be required to commence implementation of source, structural and treatment BMPs on the approved adaptive management schedule and provide an annual progress report on implementation to the department. The permit should be clear that upon completion of the adaptive management plan approved by Ecology that the permittee has attained the statutory presumption of compliance based on the narrative standard applicable to the ISGP. Should Ecology have information that shows that the permittee is adversely affecting water quality attainment then the department could exercise its authority under RCW 90.48.555 to require the permittee to obtain an individual or alternative general permit. Time extensions as provided under the current permit can be cumbersome and set artificial deadlines. Permittees should have the ability to submit plans that provide the necessary time and decision making tools to reduce stormwater pollution in the most effective, efficient and least resource demanding approach.